

Andrew N Staniforth

List of Publications by Year in descending order

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90
papers

4,959
citations

147801

31
h-index

91884

69
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90
docs citations

90
times ranked

2540
citing authors

#	ARTICLE	IF	CITATIONS
1	An accurate interpolating scheme for semi-Lagrangian advection on an unstructured mesh for ocean modelling. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 2022, 49, 119.	1.7	15
2	Forms of the thermodynamic energy equation for moist air. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2019, 145, 386-393.	2.7	3
3	Geophysically Realistic, Ellipsoidal, Analytically Tractable (GREAT) coordinates for atmospheric and oceanic modelling. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 1646-1657.	2.7	9
4	The shallow-water equations in non-spherical geometry with latitudinal variation of gravity. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 655-662.	2.7	6
5	Consistent quasi-shallow models of the global atmosphere in non-spherical geopotential coordinates with complete Coriolis force. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 979-986.	2.7	5
6	Dynamically consistent shallow-water equation sets in non-spherical geometry with latitudinal variation of gravity. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 2429-2443.	2.7	2
7	Comments on Charron et al.'s three recent articles on deriving dynamically consistent equation sets. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 3425-3430.	2.7	3
8	An inherently mass-conserving semi-implicit semi-Lagrangian discretization of the deep-atmosphere global non-hydrostatic equations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 1505-1520.	2.7	333
9	A two-dimensional mixed finite-element pair on rectangles. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 930-942.	2.7	10
10	A proposed baroclinic wave test case for deep and shallow atmosphere dynamical cores. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 1590-1602.	2.7	47
11	Deriving consistent approximate models of the global atmosphere using Hamilton's principle. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 2383-2387.	2.7	12
12	Spheroidal and spherical geopotential approximations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2014, 140, 2685-2692.	2.7	8
13	Exact axisymmetric solutions of the deep and shallow atmosphere Euler equations in curvilinear and plane geometries. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 1113-1120.	2.7	5
14	Analysis of a mixed finite-element pair proposed for an atmospheric dynamical core. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2013, 139, 1239-1254.	2.7	18
15	Horizontal grids for global weather and climate prediction models: a review. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2012, 138, 1-26.	2.7	148
16	Dispersion analysis of the spectral element method. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2012, 138, 1934-1947.	2.7	29
17	Exact stationary axisymmetric solutions of the Euler equations on $\hat{\mathbb{R}}^3$ planes. <i>Atmospheric Science Letters</i> , 2012, 13, 79-87.	1.9	7
18	Cubic-spline interpolation on a non-uniform latitude-longitude grid: achieving cross- and circum-polar continuity. <i>Atmospheric Science Letters</i> , 2010, 11, 229-238.	1.9	5

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19	An inherently mass-conserving iterative semi-implicit semi-Lagrangian discretization of the non-hydrostatic vertical-slice equations. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 799-814.	2.7	19
20	Determining near-boundary departure points in semi-Lagrangian models. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 1890-1896.	2.7	7
21	Aspects of the dynamical core of a nonhydrostatic, deep-atmosphere, unified weather and climate-prediction model. Journal of Computational Physics, 2008, 227, 3445-3464.	3.8	54
22	Semi-implicit methods, nonlinear balance, and regularized equations. Atmospheric Science Letters, 2007, 8, 1-6.	1.9	3
23	A monotonically-damping second-order-accurate unconditionally-stable numerical scheme for diffusion. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 1559-1573.	2.7	26
24	Some numerical properties of approaches to physics-dynamics coupling for NWP. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 27-42.	2.7	21
25	A time-staggered semi-Lagrangian discretization of the rotating shallow-water equations. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 3107-3116.	2.7	7
26	Analysis of the response to orographic forcing of a time-staggered semi-Lagrangian discretization of the rotating shallow-water equations. Quarterly Journal of the Royal Meteorological Society, 2006, 132, 3117-3126.	2.7	2
27	An improved regularization for time-staggered discretization and its link to the semi-implicit method. Atmospheric Science Letters, 2006, 7, 21-25.	1.9	8
28	Analysis of a regularized, time-staggered discretization applied to a vertical slice model. Atmospheric Science Letters, 2006, 7, 86-92.	1.9	2
29	Mixed Parallel-Sequential-Split Schemes for Time-Stepping Multiple Physical Parameterizations. Monthly Weather Review, 2005, 133, 989-1002.	1.4	19
30	An Unsuspected Boundary-Induced Temporal Computational Mode in a Two-Time-Level Discretization. Monthly Weather Review, 2005, 133, 712-720.	1.4	1
31	Impact of semi-Lagrangian trajectories on the discrete normal modes of a non-hydrostatic vertical-column model. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 93-108.	2.7	11
32	Comments on 'A finite-element scheme for the vertical discretization in the semi-Lagrangian version of the ECMWF forecast model' by A. Untch and M. Hortal (April B, 2004, 130, 1505-1530). Quarterly Journal of the Royal Meteorological Society, 2005, 131, 765-772.	2.7	2
33	A monotonic and positive-definite filter for a Semi-Lagrangian Inherently Conserving and Efficient (SLICE) scheme. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 2923-2936.	2.7	61
34	Conservation and Linear Rossby-Mode Dispersion on the Spherical C Grid. Monthly Weather Review, 2004, 132, 641-653.	1.4	27
35	SLICE-S: A Semi-Lagrangian Inherently Conserving and Efficient scheme for transport problems on the Sphere. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 2649-2664.	2.7	55
36	Analysis of Parallel versus Sequential Splittings for Time-Stepping Physical Parameterizations. Monthly Weather Review, 2004, 132, 121-132.	1.4	29

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37	A Problem with the Robertâ€™ Asselin Time Filter for Three-Time-Level Semi-Implicit Semi-Lagrangian Discretizations. <i>Monthly Weather Review</i> , 2004, 132, 600-610.	1.4	8
38	Analysis of semi-Lagrangian trajectory computations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 2065-2085.	2.7	16
39	The deep-atmosphere Euler equations with a mass-based vertical coordinate. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 1289-1300.	2.7	23
40	Validity of anelastic and other equation sets as inferred from normal-mode analysis. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 2761-2775.	2.7	83
41	Energy and energy-like invariants for deep non-hydrostatic atmospheres. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 3495-3499.	2.7	7
42	The Deep-Atmosphere Euler Equations in a Generalized Vertical Coordinate. <i>Monthly Weather Review</i> , 2003, 131, 1931-1938.	1.4	25
43	Validity of anelastic and other equation sets as inferred from normal-mode analysis. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2003, 129, 2761-2775.	2.7	2
44	The CMCâ€™MRB Global Environmental Multiscale (GEM) Model. Part III: Nonhydrostatic Formulation. <i>Monthly Weather Review</i> , 2002, 130, 339-356.	1.4	135
45	A Simple Comparison of Four Physicsâ€™ Dynamics Coupling Schemes. <i>Monthly Weather Review</i> , 2002, 130, 3129-3135.	1.4	23
46	Normal modes of deep atmospheres. I: Spherical geometry. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2002, 128, 1771-1792.	2.7	44
47	Normal modes of deep atmospheres. II: f -plane geometry. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2002, 128, 1793-1806.	2.7	46
48	Analysis of the numerics of physicsâ€™ dynamics coupling. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2002, 128, 2779-2799.	2.7	27
49	SLICE: A Semi-Lagrangian Inherently Conserving and Efficient scheme for transport problems. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2002, 128, 2801-2820.	2.7	79
50	A Semi-implicit Semi-Lagrangian Finite-Element Shallow-Water Ocean Model. <i>Monthly Weather Review</i> , 2000, 128, 1384-1401.	1.4	45
51	Cascade interpolation for semi-Lagrangian advection over the sphere. <i>Quarterly Journal of the Royal Meteorological Society</i> , 1999, 125, 1445-1468.	2.7	29
52	Cascade interpolation for semi-Lagrangian advection over the sphere. <i>Quarterly Journal of the Royal Meteorological Society</i> , 1999, 125, 1445-1468.	2.7	16
53	The Operational CMCâ€™MRB Global Environmental Multiscale (GEM) Model. Part II: Results. <i>Monthly Weather Review</i> , 1998, 126, 1397-1418.	1.4	283
54	The Operational CMCâ€™MRB Global Environmental Multiscale (GEM) Model. Part I: Design Considerations and Formulation. <i>Monthly Weather Review</i> , 1998, 126, 1373-1395.	1.4	900

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55	Finite Elements for Shallow-Water Equation Ocean Models. <i>Monthly Weather Review</i> , 1998, 126, 1931-1951.	1.4	62
56	Andr� Robert (1929�1993): His Pioneering Contributions to Numerical Modelling. <i>Atmosphere - Ocean</i> , 1997, 35, 25-54.	1.6	4
57	Preliminary Results from a Dry Global Variable-Resolution Primitive Equations Model. <i>Atmosphere - Ocean</i> , 1997, 35, 245-259.	1.6	5
58	An accurate interpolating scheme for semi-Lagrangian advection on an unstructured mesh for ocean modelling. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1997, 49, 119-138.	1.7	10
59	The tangent linear model for semi-Lagrangian schemes: linearizing the process of interpolation. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1996, 48, 74-95.	1.7	14
60	The tangent linear model for semi-Lagrangian schemes: linearizing the process of interpolation. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1996, 48, 74-95.	1.7	5
61	A Generalized Family of Schemes that Eliminate the Spurious Resonant Response of Semi-Lagrangian Schemes to Orographic Forcing. <i>Monthly Weather Review</i> , 1995, 123, 3605-3613.	1.4	13
62	A Diagnostic Analysis of the Superstorm of March 1993. <i>Monthly Weather Review</i> , 1995, 123, 1740-1761.	1.4	31
63	Deriving Significant-Level Geopotentials from Radiosonde Reports. <i>Monthly Weather Review</i> , 1995, 123, 222-229.	1.4	0
64	The impact of a digital filter finalization technique in a global data assimilation system. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1995, 47, 304-323.	1.7	18
65	The impact of a digital filter finalization technique in a global data assimilation system. <i>Tellus, Series A: Dynamic Meteorology and Oceanography</i> , 1995, 47, 304-323.	1.7	29
66	Modifying the conventional three-level semi-implicit semi-Lagrangian scheme to eliminate orographically induced spurious resonance. <i>Atmosphere - Ocean</i> , 1995, 33, 109-119.	1.6	2
67	A Mass-Conserving Semi-Lagrangian Scheme for the Shallow-Water Equations. <i>Monthly Weather Review</i> , 1994, 122, 243-248.	1.4	47
68	Spurious Resonant Response of Semi-Lagrangian Discretizations to Orographic Forcing: Diagnosis and Solution. <i>Monthly Weather Review</i> , 1994, 122, 366-376.	1.4	82
69	The Canadian Regional Data Assimilation System: Operational and Research Applications. <i>Monthly Weather Review</i> , 1994, 122, 1306-1325.	1.4	47
70	A Variable-Resolution Semi-Lagrangian Finite-Element Global Model of the Shallow-Water Equations. <i>Monthly Weather Review</i> , 1993, 121, 231-243.	1.4	73
71	A Stability Analysis of a Family of Baroclinic Semi-Lagrangian Forecast Models. <i>Monthly Weather Review</i> , 1993, 121, 815-824.	1.4	22
72	The Conversion of Semi-Lagrangian Advection Schemes to Quasi-Monotone Schemes. <i>Monthly Weather Review</i> , 1992, 120, 2622-2632.	1.4	141

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73	Variable Resolution and Robustness. Monthly Weather Review, 1992, 120, 2633-2640.	1.4	28
74	Forecast models for intermediate-range forecasting. Advances in Space Research, 1992, 12, 233-242.	2.6	0
75	Semi-Lagrangian Integration Schemes for Atmospheric Models—A Review. Monthly Weather Review, 1991, 119, 2206-2223.	1.4	899
76	An Accurate and Efficient Finite-Element Global Model of the Shallow-Water Equations. Monthly Weather Review, 1990, 118, 2707-2717.	1.4	46
77	Improving Variable-Resolution Finite-Element Semi-Lagrangian Integration Schemes by Pseudostaggering. Monthly Weather Review, 1990, 118, 2718-2731.	1.4	5
78	Semi-Lagrangian integration schemes and their application to environmental flows. , 1990, , 63-79.		5
79	A Two-Time-Level Semi-Lagrangian Semi-implicit Scheme for Spectral Models. Monthly Weather Review, 1988, 116, 2003-2012.	1.4	70
80	An Efficient Two-Time-Level Semi-Lagrangian Semi-Implicit Integration Scheme. Quarterly Journal of the Royal Meteorological Society, 1987, 113, 1025-1039.	2.7	136
81	An efficient two-time-level semi-Lagrangian semi-implicit integration scheme. Quarterly Journal of the Royal Meteorological Society, 1987, 113, 1025-1039.	2.7	51
82	A Variable-Resolution Finite-Element Model of Frontogenesis. Monthly Weather Review, 1986, 114, 1340-1353.	1.4	4
83	Semi-Implicit Semi-Lagrangian Integration Schemes for a Barotropic Finite-Element Regional Model. Monthly Weather Review, 1986, 114, 2078-2090.	1.4	33
84	Numerical weather forecasting research in the Canadian weather service. Telematics and Informatics, 1985, 2, 279-287.	5.8	1
85	Stability of Vertical Discretization Schemes for Semi-Implicit Primitive Equation Models: Theory and Application. Monthly Weather Review, 1983, 111, 1189-1207.	1.4	19
86	The Accuracy of a Finite-Element Vertical Discretization Scheme for Primitive Equation Models: Comparison with a Finite-Difference Scheme. Monthly Weather Review, 1983, 111, 2298-2318.	1.4	13
87	A Baroclinic Finite-Element Model for Regional Forecasting with the Primitive Equations. Monthly Weather Review, 1979, 107, 107-121.	1.4	53
88	A Variable-Resolution Finite-Element Technique for Regional Forecasting with the Primitive Equations. Monthly Weather Review, 1978, 106, 439-447.	1.4	82
89	A Semi-Implicit Finite-Element Barotropic Model. Monthly Weather Review, 1977, 105, 154-169.	1.4	57
90	A Finite-Element Formulation for the Vertical Discretization of Sigma-Coordinate Primitive Equation Models. Monthly Weather Review, 1977, 105, 1108-1118.	1.4	42